

Maritime UltraViolet Antifouling (MUVA)

MUVA is a biofouling control capability that uses germicidal light, or electromagnetic emission, to safely and effectively prevent organic biological growth buildup on underwater surfaces, such as the hulls of maritime vessels.

Background

The Navy sought capabilities that would help reduce the issues caused by biofouling on its weapons systems and underwater infrastructures.

Boston Engineering responded to SBIR topic N161-044 to develop a maintenance option to prevent biofouling buildup and reduce the use of more energetic antifouling techniques employed by the Navy and other commercial maritime vessel operators.

MUVA's Approach

MUVA utilizes a low contact, scalable, tunable UV-C light module that is safe to use around humans and other marine life.

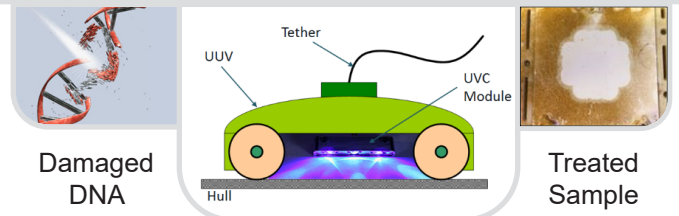
UV-C radiation dosing impedes the advancement of biofouling growth without impacting hull coating integrity.



MUVA's Impact

- ✓ Noise Reduction
- ✓ Fuel Efficiency
- ✓ Sensor Performance
- ✓ Coating Integrity
- ✓ Weapon Availability

MUVA Overview



Technology Highlights



Operation Modes

- Manual
- Autonomous
- Semiautonomous



UV-C Light Delivery Methods

- Swimming vehicles
- Crawling vehicles
- Handheld